

An Advanced Neutron Spectrometer for Future Manned Exploration Missions

An Advanced Neutron Spectrometer (ANS) is being developed to support future manned exploration missions. This new instrument uses a refined gate and capture technique that significantly improves the identification of neutrons in mixed radiation fields found in spacecraft, habitats and on planetary surfaces. The new instrument is a composite scintillator comprised of PVT loaded with lithium-6 glass scintillators. We will describe the detection concept and show preliminary results from laboratory tests and exposures at particle accelerators.

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